UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,975	03/26/2004	Robert E. Davis	ACADIA.035A	7906

20995 7590 06/19/2007

KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER	
RAMACHANDRAN, UMAMAHESWARI	
ART UNIT	**PAPER NUMBER**
1617	

NOTIFICATION DATE	DELIVERY MODE
06/19/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
eOAPilot@kmob.com

Office Action Summary	Application No.	Applicant(s)	
	10/809,975	DAVIS ET AL.	
	Examiner	Art Unit	
	Umamaheswari Ramachandran	1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicants' election of group I, claims 1-11 in the reply filed on May 2 2007 is acknowledged. Claims 12-13 have been cancelled. Applicants have elected a species of compound of formula IX (claim 6). Election was made **without** traverse in the reply filed on 5/2/2007. Thus the restriction requirement elected is made final. Claims 1-11 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 6-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Lavand'homme et al. (Anesthesiology, 1999, 91, 1455-61) in view of Skjaerback et al. (US 2003/0176418) and further in view of Mitchell (J of Pain and Symptom Management, Vol. 21, 5, May 2001).

Lavand'homme et al. teaches cholinergic agents such as bethanechol, a muscarinic agonist reduces mechanical allodynia (tactile allodynia) after nerve injury to animals and may be useful in the treatment of neuropathic pain (see Abstract, p 1459, lines 4-6). The reference teaches the administration and determination of whether bethanechol reduced allodynia in the subject.

The reference does not teach the elected species, compound of formula IX to selectively activate the M (1) receptor subtype.

Skjaerback et al. teaches the compound (4-[3-(4-Butylpiperidin-1-yl) propyl]-7-fluoro-4H-benzo[1,4]oxazin-3-one), of formula (IX) as in claim 6 of the instant application (p 10, lines 37-38) as muscarinic M1 and M4 subtype. The reference further teaches the compound in a method of treatment of pain (p 50, claim 13, p 53, claim 23).

It would have been obvious to one of ordinary skill in the art at the time of the invention to administer a compound of formula (IX) for the treatment of neuropathic pain. The motivation to do so is taught by Lavand'homme et al. Lavand'homme et al teaches bethanechol, a muscarinic agonist to be useful in the treatment of allodynia and in the treatment of neuropathic pain. One of ordinary skill in the art would have been motivated at the time of the invention to use a compound of formula (IX) in the treatment of neuropathic pain as this compound has been shown to be a muscarinic agonist by Skjaerback et al. and one can expect similar success or superior results in relieving neuropathic pain by using this compound instead of bethanechol.

Lavand'homme et al and Skjaerback et al. do not teach a method of treating a subject for hyperalgesia, or thermal hyperalgesia and also do not teach the neuropathic pain to be associated with one of the diseases listed in claim 4.

Mitchell teaches that allodynia and hyperalgesia are clinical components of neuropathic pain and neuropathic pain conditions include cancer, painful diabetic neuropathy etc. (p 443, col. 2, lines 1-3, p446, col. 1, lines 7-11).

It would have been obvious to one of ordinary skill in the art at the time of the invention to treat subjects with hyperalgesia with a muscarinic agonist compound such as listed in claim 6 (formula IX). The motivation to do so is because Lavand'homme et al

teaches that muscarinic agonist is useful in the treatment of allodynia a clinical symptom of neuropathic pain. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a muscarinic agonist as listed in claim 6 to treat hyperalgesia which is another clinical symptom of neuropathic pain. Also, it would have been obvious to one of ordinary skill in the art to treat painful conditions associated with cancer, diabetes etc as Mitchell teaches them as neuropathic pain conditions and Lavand'homme et al teaches the usefulness of muscarinic agonist in the treatment of neuropathic pain.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lavand'homme et al. (Anesthesiology, 1999, 91, 1455-61) in view of Skjaerback et al. (US 2003/0176418) and further in view of Mitchell (J of Pain and Symptom Management, Vol. 21, 5, May 2001) as applied to claims 1-4, 6-11 above and further in view of Baker et al. (U.S. 5,242,927).

Lavand'homme et al, Skjaerback et al. and Mitchell's teachings discussed as above.

The references do not teach muscarinic agonist compound such as compound of formula (IX) does not alleviate acute pain.

Baker et al. teach muscarinic agonist oxadiazole compounds in the treatment of severe painful conditions such as rheumatism, arthritis, and terminal illness (col.1, 18-21).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a compound that selectively activates M(1) receptor type that does not

alleviate acute pain. Baker et al. teach muscarinic agonist compounds are used in the treatment of severe painful conditions such as terminal illness. The pain from these conditions arises as a result of neuropathic pain and hence the compounds are used to selectively target the neuropathic pain. It would have been obvious to one of ordinary skill in the art to use muscarinic agonist compounds such as compound of formula IX in a method of treatment that does not alleviate acute pain because to selectively target and treat neuropathic pain effectively.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Umamaheswari Ramachandran whose telephone number is 571-272-9926. The examiner can normally be reached on M-F 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SREENI PADMANABHAN
SUPERVISORY PATENT EXAMINER